

# **Installation Pest Management Plan**

**Tobyhanna Army Depot**

**Tobyhanna, Pennsylvania**

**(Industrial Operations Command)**

**15 March 1997**

## Signature Page

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## **Executive Summary**

Tobyhanna Army Depot (TYAD) is part of the Army Materiel Command (AMC) which consists of a nationwide network of military installations and activities. TYAD is a government owned and operated facility situated on a 1,293 acre site located at Tobyhanna, Pennsylvania, in Coolbaugh Township, Monroe County, in the Pocono Mountains of northeastern Pennsylvania. The primary industrial mission of TYAD is the fabrication, receipt, storage and repair of military communications and electronic systems.

The content of this Installation Pest Management Plan (IPMP) applies to all activities and individuals working, residing, or otherwise doing business on this installation, and will be implemented to the maximum extent possible. At no time will pest management operations be performed in a manner that may cause harm to personnel or the environment. Pest management responsibilities will begin with those individuals that occupy or maintain buildings or open spaces on the installation. Non-chemical control efforts will be used to the maximum extent possible before pesticides are used. This plan will be a working document and will be continually updated to reflect actual pest management practices.

This IPMP describes the installation's pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety and environmental requirements of the program. This program uses both DOD certified Government personnel and state certified, commercial contract, pest management technicians to control pests. Pests addressed in this plan include undesirable plants, general household/nuisance pests, miscellaneous vertebrate pests, disease vectors and medically important arthropods, and pests of ornamental plants and turf.

## Introduction

This IPMP is a framework through which pest management is defined and accomplished on the installation. The plan identifies elements of the program including health and environmental safety, pest identification, pest management, and pesticide storage, transportation, use and disposal. This plan is to be used as a tool to reduce reliance on pesticides, to enhance environmental protection, and to maximize the use of integrated pest management (IPM) techniques. This plan reflects current DOD/Army policies, procedures and standards for pest management operations at TYAD, and incorporates the requirements of the Environmental Protection Agency (EPA) and those set forth by the Commonwealth of Pennsylvania.

The objective of the IPMP is to develop and maintain a safe and effective pest management program that will protect the health, environmental quality, esthetics values and ecological balance of the installation community by-

- Protecting real estate investments from depreciation from pests.
- Complying with the environmental protection and improvement policies of AR 200-1, AR 200-2, AR 420-76 and all other pertinent laws and regulations.
- Controlling potential disease vectors as needed.
- Preventing damage to natural resources by insects or other pests in accordance with AR 200-3.

This IPMP is written under the auspices of:

- DOD Dir. 4150-7, *DOD Pest Management Program*, 22 April 1996.
- AR 420-76, *Pest Management*, 3 June 1986.
- The Installation Master Plan.
- The Environmental Assessment written for this plan.
- The Installation Natural Resources Management Plan.
- The Installation Spill Response Program.

The IPMP provides guidance for operating and maintaining an effective pest management program. IPM principles consisting of the judicious use of both non-chemical and chemical control techniques are stressed in this plan to achieve effective pest management with minimal environmental contamination. Adherence to this plan will ensure effective, economical and environmentally acceptable pest management and will maintain compliance with pertinent laws and regulations.

The Installation Pest Management Coordinator (IPMC) maintains this IPMP. While pen and ink changes are made to this plan throughout the fiscal year, this plan is reviewed and updated annually to reflect all changes made in the pest management program during each fiscal year. Annual updates of this plan are sent to the US Army Environmental Center Pest Management Consultant not later than 30 October each year.



## Installation description

TYAD is part of the Army Materiel Command (AMC) which consists of a nationwide network of military installations and activities. It is situated on a 1,293 acre site located at Tobyhanna, Pennsylvania, in Coolbaugh Township, Monroe County, in the Pocono Mountains of northeastern Pennsylvania; approximately 25 miles southeast of Scranton, Pennsylvania, 41 degrees-11 minutes-0 seconds north latitude and 75 degrees-25 minutes-0 seconds west longitude. Nearby access routes include I-380 which connects to I-80 nine miles to the south, I-84 seventeen miles to the north, and I-81 twenty-four miles to the north; state highways 423 and 611; and local rail lines which lead to the installation's rail yard. A helicopter pad is also available on the installation.

The area immediately surrounding TYAD, with the exception of the village of Tobyhanna, is undeveloped, sparsely populated, and heavily wooded. A combination of state parks and state gamelands surround the installation on the north, east and west; used for both outdoor recreation and wildlife habitat. More than half of the installation property remains undeveloped, predominantly wooded rolling hills and wetlands. A total of 398 acres of the installation are improved grounds consisting of an industrial complex, 10 miles of rail lines, 13 miles of utility lines and numerous paved areas and building sites. Included are forty-two family housing units used to quarter approximately 24 permanent military personnel and 202 military dependents. Additionally, the installation employs approximately 3,500 civilian personnel.

The topography consists of gently rolling hills and valleys with numerous swampy and lowland areas. The northern and western boundaries of the installation adjoin state game and parklands. To the south and east of the installation there exists approximately 14,000 acres of woodland controlled and managed by the Pennsylvania State Game and Parks Commission as a fish and wildlife reserve. There are several wetland areas on the installation including two streams, a 5.7 acre lake, a 65 acre wetland area that provide ideal habitat for fish and various types of waterfowl and wildlife, including ducks, geese, beavers, deer and turtles. TYAD is situated in the Pocono Plateau section of the Appalachian Plateau Physiographic Province. All bedrock units belong to the Upper Devonian Catskill Formation. North of Powder Smoke Ridge the bedrock consists of the Duncannon Member, a red and gray sandstone with some red conglomerate which occupies about 20 percent of the installation. Covering the remainder of the installation and underlying the Duncannon Member is the Poplar Gap Member. It is a medium-fine, well-hardened, quartzite gray sandstone up to 1,050 feet in thickness. Though outcroppings occur on Powder Smoke Ridge, this bedrock is almost completely masked by surface deposits.

TYAD has a continental climate due to the prevailing west to east wind direction, and the higher elevations of the Pocono Plateau are significantly cooler than many of the surrounding regions. Consequently, winters tend to be longer and colder while summers are shorter and milder. This region has no distinct wet or dry season, and the average annual precipitation is 50 inches. Normally, just over half of this falls between the months of March and August, with the greatest monthly total occurring in July. The average temperature for the region is 46 °F.

There are six drainage areas within the installation. Storm ducts drain most of the runoff water from the depot with the discharge eventually flowing into Cross Keys Run, Hummler Run, or to the unnamed creek's tributaries that flow into Gouldsboro Lake. A prioritized list to protect waterways in the event of a multiple spill is identified in Section 2, paragraph 11-2. Since spills that enter underground storm drains are difficult to clean up until they reach a discharge point, clean up operations will be most effective if accomplished before they can reach a storm drain.

Topographical and site maps of the installation are on file in the Environmental Office, located in Building 7. In addition, soil types and a land use inventory are provided in Appendix E.

## **Responsibilities**

The following details the responsibilities of the various organizations involved in the successful execution of the IPMP. An organizational matrix depicting the interaction of the various individuals and offices is provided in figure 1 below.

### Installation Commander

- Designate the pest management coordinator (IPMC) for all installation pest management activities.
- Approve and support the IPMP.
- Ensure that installation pest management control personnel are adequately trained and certified, as required.
- Ensure safe conduct of pest management operations with minimal impact on the environment.

### Director of Public Works

- Review the IPMP for approval.
- Fund all contracted pest management activities and supply requirements.
- Review and sign monthly pest management reports, as required.
- Provides all mechanical controls, normally performed by Buildings and Grounds personnel.

### Installation Pest Management Coordinator (IPMC)

- Prepare, monitor and update the IPMP.
- Coordinate, record and report pest surveillance and control activities.
- Monitor certification and continuing pest management training for DOD certified pest management personnel.
- Coordinate, monitor and provide quality assurance (QA) for contracts dealing with pesticide application, maintaining a copy of each contract on file in a contract folder.
- Acts as the Contracting Officer's Representative (COR) for all contracted services.
- Coordinate with local, state and federal agencies, as necessary, to conduct the installation's pest management program.
- Provide answers to pest management questions from the Commander, MACOM, and DA.
- Provide QA evaluations for all pest control and surveillance operations performed by contract personnel.
- Complete daily and monthly reporting requirements using DD Forms 1532 and 1532-1.
- Prepare an annual pesticide use summary report indicating the amount of pesticides used in pounds of active ingredients. These reports are sent to the U.S. Army Environmental Center and to the U.S. Army Industrial Operations Command (ATTN: AMSIO-ISR).

### Building occupants/residents and tenant activities

- Applying good sanitation practices in order to prevent pest infestation.

- Report pest problems/infestations beyond their control to the IPMC at the Environmental Management Division (EMD) office, Building 7, at 895-6594/7098. Housing residents may also report pest problems to the Installation Housing Office at 895-7970/7647.
- Cooperate with installation pest management personnel in scheduling pest management operations as needed, to include preparing areas for treatment.

#### Installation Housing Office

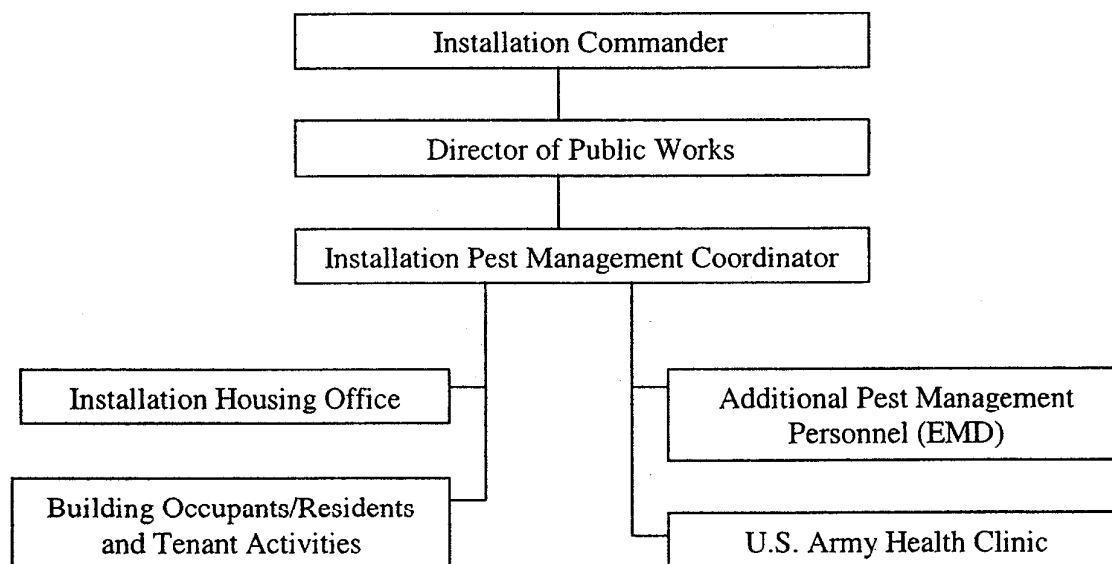
- Report pest problems from housing residents and barracks occupants to the IPMC at the EMD office, Building 7, at 895-6594/7098.

#### Additional Pest Management Personnel

- Assist in developing the IPMP.
- Assume the duties of the primary IPMC during his/her absence.

#### US Army Health Clinic

- Provide for the medical surveillance of pest management personnel as depicted in “*Health and Safety, Medical surveillance of pest management personnel*”, below.



**Figure 1. – Organizational Matrix**

### **Pest Management Priorities**

The following outlines describe the pests found at TYAD in order of importance and severity. There are no unique priorities which occur at TYAD at any given time interval.

- Undesirable plants

These pest constitute unwanted weeds and grasses in parking lots, on railroad tracks, in drainage ditches, around mowing obstructions and along fence lines and fuel lines. Control through the use of chemical herbicides is performed on an annual basis by contracted services. Non-chemical controls are performed as a grounds maintenance function, and include mowing by contracted services.

- General household/nuisance pests

Pests of this nature of concern at TYAD include cockroaches, ants, spiders, silverfish, earwigs, crickets, fleas, wasps and other occasional pests. While none of these pests pose medical problems at this time, population control of these pests is required to maintain the welfare and morale of building occupants and installation residents. As actual eradication of these pests is not feasible, effective controls are used in order to reduce their populations to tolerable levels, or to temporarily eliminate them. Controls include removal of breeding/harborage sites, maintaining high levels of sanitation and the use of chemical controls when other means prove unsuccessful. Chemical controls for these pests are used when necessary and in conjunction with other methods when possible.

The cockroach is the most common and significant pest of this category, posing an adverse effect on moral and existing as a nuisance in lavatories, and in work, dining and living areas. The three most common species found on the installation are the German, the American and the Brown-banded. An integrated approach utilizing both chemical and non-chemical controls to suppress these populations is used as needed. However, chemical controls are used only on an "as needed" basis with bait stations being the preferred method. Bait stations are normally applied in food service areas to control these pests, however, sanitation is considered the primary method of control. Control services for all other pests including ants, spiders, crickets, fleas, wasps, etc., are provided on an "on-call" basis only.

Common use buildings with the greatest potential for recurring problems (food handling facilities, the commissary and the exchange) are provided contracted inspection/control services on a biweekly basis. Primary responsibility for the control of nuisance pests in other facilities where problems occur only occasionally rests with the occupants, with control services provided on an "on-call" basis. These facilities include warehouses, shops, storage buildings, industrial facilities, offices and government quarters.

- Miscellaneous vertebrate pests

These pests consist primarily of mice, birds and a variety of vertebrate species indigenous to the natural habitat surrounding the installation.

While the potential for mice to act as disease reservoirs may elevate their control to the highest priority, problems currently associated with their populations have been limited to minor burrowing and gnawing activities, resulting in the destruction or contamination of foods and stored products, primarily during the autumn months. Scheduled surveillance inspections and control activities in all food handling/commissary/exchange facilities are provided on a biweekly basis utilizing state certified contract personnel to control mice. The primary methods used to control mice are the identification and elimination of possible routes of entry and harborage/nesting sites, the use of glue boards and traps, and a very limited use of chemical bait stations.

Various other vertebrate pests, which occasionally interfere with depot operations, include birds, skunks, raccoons, bats, cats, dogs, and woodchucks. Live traps are used for the capture and removal of these pests. Captured dogs and cats are turned over to the Humane Society while raccoons, skunks and other naturally occurring pests are live-trapped and removed to a woodland area for release. At no time are chemical controls used on these types of pests.

- Disease vectors and medically important arthropods

Mosquitoes, biting gnats and filth flies (houseflies) constitute the most problematic pests at the installation. The mosquito and biting gnat species that cause most of the problems on the depot are not medical problems and breed almost exclusively in the wetland areas surrounding the installation.

Adult mosquitoes are controlled by the elimination of mosquito breeding areas such as water impoundments, small pools, open containers, ditches, etc. in the improved areas of the installation. Chemical controls are utilized only upon the recommendation and direction of the medical entomologist from Carlisle Barracks, Carlisle, PA. Controls are never utilized in the wetland areas. While filth flies have not been a source of medical problems, they may pose a problem if not controlled. The control program for filth flies emphasizes the elimination of on-post breeding areas, preventing entry into buildings (screens on doors and windows), maintaining high sanitation levels, the timely removal of wastes, and a requirement for dumpsters used at dining and kitchen facilities to have lids and to be cleaned frequently. Using plastic bags for the disposal of garbage and trash is also standard practice. Chemical controls are used only when necessary and in conjunction with other methods when possible.

- Pests of ornamental plants and turf

These pests include scale insects, aphids, elm leaf beetles, bagworms, tent caterpillars, green June beetles, Japanese beetles, armyworms and sod webworms. Their control is required only when damaging populations occur in order to limit damage to ornamental plants and turf, and are rarely a problem. Surveillance and the use of non-chemical controls such as the removal of diseased turf/vegetation and the use of insect traps are emphasized in controlling these pests. In order to avoid unnecessary environmental contamination, maximize the use of natural controls and avoid pest resistance problems, contracted chemical controls are used only as needed.

## **Health and Safety**

- Medical surveillance of pest management personnel

All DOD pest management personnel are tested and examined to ensure that they are capable of wearing a respirator, and to establish a baseline red blood cell (RBC) cholinesterase level. Examinations include a liver and kidney function test, a complete blood count, a respiratory evaluation, and a pulmonary function test. In addition, all pest management personnel are enrolled in the installation's health monitoring and hearing conservation programs. At no time, however, do DOD personnel apply pesticides on the installation. Such controls are employed only by state certified contract personnel.

- Hazardous Communications

All DOD pest control personnel are trained in Hazard Communications requirements and procedures. Copies of labels and Material Safety Data Sheets (MSDS) for each chemical pesticide used by contract personnel to perform pest control operations are maintained by the IPMC in the contract folder. During pest control operations, legible copies of labels and MSDSs will be on hand for each pesticide being used, either on-site or in the Contractor's vehicle.

- Personnel protective equipment

All DOD pest management personnel have been trained in spill response actions, and are equipped with the required personal protective equipment per OSHA guidelines.

- Protection of the public

Precautions taken during pest control operations in order to protect the public health include use of chemical pesticides only when absolutely necessary, briefing building occupants on required precautions and preparation instructions, and applying chemical pesticides in work facilities during non-duty hours when personnel are not present.

Special care will be given when chemical pesticides are applied in or about child care facilities, quarters in which newborns reside, and health clinic/medical treatment facilities. In addition, chemical pesticides will not be applied about or near water storage/treatment facilities.

- Pesticide control vehicles, and storage facilities and associated fire protection plans

There are no pesticide storage facilities located at TYAD, nor will authorization to store chemical pesticides be granted at any time.

All chemical pesticides used in the performance of pest control activities will only be provided and applied by state certified commercial contract personnel.

Only vehicles utilized by state certified contract personnel may transport or be used to secure chemical pesticides on the installation. At no time will Government vehicles be used to transport or secure chemical pesticides.

## **Environmental Protection**

- Sensitive areas

There are several wetland areas on the installation that provide ideal habitat for fish and various types of wildlife, including ducks, geese, beavers and turtles. Pesticide applications and/or habitat modifications will not be performed in these areas.

The mixing of herbicides on installation property will be performed only at the Reserve Convoy Refueling Station located on the West Side of the main parking lot that is equipped with a concrete pad and sump for containing spill materials.

- Endangered/protected species and critical habitat

Presently, four state-endangered species reside within the wetlands located on the installation. Pesticide applications and/or habitat modifications will not be performed in these areas, and control measures will not be performed on or near state or federally protected or endangered species.

- Cultural/Historical Resources

At present, there are no known cultural or historically significant resources on the installation.

- Pesticide spills and remedial action An adequate spill cleanup kit shall be maintained on all pest control vehicles. Pesticide spill cleanup and notification procedures will be performed in accordance with appendix D, *Pesticide spill cleanup and notification procedures/spill kit components*.

- Prohibited activities

Control measures will not be performed on or near state or federally protected or endangered species.

Except for the use of pre-emergent herbicides, chemical pesticides will not be applied as preventive measures.

Pesticides containing methyl bromide will not be used on the installation at any time.

Federal and state restricted use pesticides will not be used at any time.

Contracted and DOD personnel will not perform aerial applications/spraying of chemical pesticides on the installation at any time.

Control operations will not be performed outside developed cantonment areas.

Pesticide applications and/or habitat modifications will not be performed in wetland areas.

Government vehicles will not be used to transport or secure chemical pesticides.

Chemical pesticides will not be stored on the installation.

DOD personnel will not apply chemical pesticides. Only state certified, commercial contract personnel may apply chemical pesticides on the installation.

Chemical pesticides will not be applied about or near water storage/treatment facilities.

Chemical pesticides, other than chemical herbicides, will not be mixed on Government property, and then only by state certified contract personnel.

Chemical pesticides will not be purchased for use by DOD personnel, nor will they be purchased for distribution to installation residents or tenant activity personnel.

Except for poison bait traps used to control mice or rats, chemical pesticides will not be used to control vertebrate pests.

In the course of performing live-trap operations to control vertebrate pests (other than mice), live traps will not go unchecked for more than 24 hours and will not be placed during weekends and holidays.

Chemical herbicides will not be applied unless the IPMC is present on the installation and available to perform QA evaluations.

Chemical herbicides will not be applied during normal duty hours, unless approved by, and in the presence of the IPMC, and then only in unoccupied areas affording restricted access.

Chemical pesticides will not be disposed of on the installation.

Tenant activity personnel will not apply chemical pesticides on the installation, nor will they solicit for contracted services to do so.

- Pesticide spills and remediation

Pesticide spill and remediation procedures are provided in appendix D, *Pesticide spill cleanup and notification procedures*.

## **Support Agreements and Outleases**

Installation facilities occupied by tenant activities are provided pest control services in accordance with existing support agreements. These services include scheduled services provided by state certified contract personnel, and on-call services provided by state certified contract personnel or DOD certified personnel. All services are coordinated, scheduled and inspected by the IPMC.

Tenant activities in need of such services are required to contact the IPMC directly at 895-6594. Outleasings of land for agricultural or other purposes is not granted.

### **Equipment, Supplies, and Installation Pest Control Facilities**

The Contractor will provide all chemical pesticides and application equipment (including personal safety equipment) necessary. Safety equipment provided by the Contractor shall be in accordance with the appropriate state and Federal requirements and recommendations of the EPA approved label for each chemical pesticide being applied.

The Government will not maintain pesticide supplies, facilities for the storage of chemical pesticides, equipment for use in the application of chemical pesticides, or Government vehicles for use in transporting or securing chemical pesticides.

A mixing pad for mixing chemical herbicides is available for use by state certified commercial contractors at the Reserve Convoy Refueling Station located on the west side of the main parking lot. No other mixing facilities exist on the installation.

The Directorate of Public Works provides funding for the purchase and replacement of traps used by DOD certified personnel.

### **Program Administration**

- General

The Pest Management Program is administered by the IPMC in accordance with a memorandum of agreement between the Environmental Management Division and the Directorate of Public Works (D/PW). Buildings and Grounds personnel within D/PW normally perform mechanical controls while the IPMC performs non-chemical vertebrate and insect controls.

The IPMC also acts as the COR for all contracted services.

- Reports and records

Adequate records of all pest management operations performed by either contract or DOD certified personnel are maintained by the IPMC, and include both daily and monthly reports recorded on DD Forms 1532 and 1532-1.

- Training and quality assurance (QA)

TYAD employees who perform QA for contracted work or perform non-chemical controls are DOD certified in the categories in which work is performed, and have been trained in hazardous communications and emergency spill response procedures, and COR requirements.

QA inspection reports are maintained by the IPMC.

Contracted pest control personnel are certified under the EPA-approved state plan for the Commonwealth of Pennsylvania, (40CFR171), and have valid state pesticide licenses issued to them by the Pennsylvania Department of Agriculture (DOA).

Copies of up to date certification records and licenses for both contract and DOD personnel are maintained by the IPMC.

- Work performed



Scheduled inspection and control operations are performed by contract personnel and specified by contract requirements. All other operations are provided on an on-call basis only, or when facility inspections indicate that controls are needed.

- Equipment repairs and replacement.

The only equipment utilized by DOD certified personnel are the traps used in vertebrate control. In the event replacement traps are required, funds are provided by the D/PW.

- Unfunded or unplanned requirements.

At present, there are no known unfunded or unplanned requirements. However, if such instances should occur, they would be funded by the D/PW (see "*Resources, Funding*").

## **Sales and Distribution of Pesticides**

- AAFES and Commissary sales

Pesticides sold in the Post Exchange (Bldg 334) and the Commissary (Bldg 816), are registered by the EPA for general use; restricted use and commercial products are not sold. These products are grouped into several categories: products applied to pcts for ectoparasite control, repellents, household, and lawn and garden products. A spill clean-up kit is in the immediate vicinity of each facility, and personnel are familiar with the use of the clean-up kit and installation spill contingency procedures.

While these materials are available for purchase by installation residents, the sales and distribution activities of the Post Exchange and Commissary are not considered a part of the IPMP, nor are records of these sales maintained by the IPMC. Installation housing residents are asked to contact the installation housing office in the event of a pest problem instead of purchasing these items. The IPMC is then contacted by the installation housing office for corrective action. In the event chemical pesticides are required to resolve a pest problem, a state certified commercial contractor will provide the service.

Pesticides are not distributed on the installation by medical or veterinarian services.

- Family housing self-help and the self service supply center (SSSC)

While residents of family housing are able to purchase those pest control products available at either the Post Exchange or the Commissary, chemical pesticides are not maintained by or purchased for distribution through either the self-help store or the SSSC.

Mechanical and live traps for controlling mice are maintained by the IPMC and are available for distribution to installation residents and tenant activity personnel upon request.

## **Installation Support of Non-Installation Activities**

Services are not provided to off-post activities/organizations. See "*Support Agreements and Outleases*" for information concerning tenant activities.

## Commercial Contracts

All commercial contract requirements will be reviewed and approved by a MACOM pest management consultant.

Chemical pesticides may only be applied by state certified commercial contract personnel. All contractors performing pest control services must be certified under the EPA-approved state plan for the Commonwealth of Pennsylvania, (40CFR171), and have in their possession a valid State Pesticide License issued by the Pennsylvania Department of Agriculture (DOA).

The Contractor will provide all chemical pesticides and application equipment (including personal safety equipment). Safety equipment provided by the Contractor shall be in accordance with the state and Federal requirements and label recommendations for each chemical pesticide being applied.

The Government may provide water and electrical power IAW contract requirements, however, shop and storage facilities are not available on the installation and will not be provided.

Contractors performing pest control services shall comply with contract reporting requirements and the reporting requirements of the Pennsylvania Pesticide Control Act (PPCA).

All contracted services will be inspected and observed by the IPMC to ensure quality assurance. Random sampling will not be used as a method to evaluate quality assurance for pest management contracts.

QA inspections may include, but are not limited to-

- Direct inspection of unopened pesticide containers to verify that the chemicals as listed on the label meet the contract specifications and are suitable for the intended use.

- Observing the mixing, measuring, and application procedures to ensure technical adequacy. Note, that only chemical herbicides may be mixed on the depot, and only then at the Reserve Convoy Refueling Station located on the west side of the main parking lot.

Performance work statements for commercial contract services are provided as part of the contract specifications, and are not included in this plan. These specifications and all other supporting documents (personnel state certifications, MSDSs, copies of container labels, etc.) are maintained on file in the contract folder by the IPMC.

Contractors will only perform work at TYAD under the EPA certification categories 2, 3, 5, 6, 7, and 8.

## Resources

- Funding

Funding for the IPMP is derived internally from the Directorate of Public Works.

- Staffing

Staffing requirements for the IPMP consist of one DOD certified technician appointed on orders as the IPMC, and two additional DOD certified technicians who assume the duties of the IPMC in his absence. The individuals that comprise the program's staff are listed in the following table along with the categories in which they are certified. Copies of individual training certificates and DOD certifications are maintained on file by the IPMC.

Table 1, Pest Control Staff

Name	Title	DOD Certificate No.	Categories
Matthew Ober	Environmental Engineer IMPC	A-113-940900	2, 3, 5, 6, 7, 8

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## Appendix A

### Integrated Pest Management (IPM) Outlines

#### **PEST:** Undesirable Plants

**SITE:** Improved areas within the cantonment area of the installation (around buildings, athletic fields and recreational areas, parking lots and improved lawn areas), railroad lines, fence lines and drainage ditches.

1. Purpose: To control the spread and growth of undesirable plants in the above listed areas.
2. Surveillance:
  - a. Conducted by: Buildings and Grounds personnel and by DOD pest control personnel.
  - b. Methods: Visual observation.
  - c. Frequency: At the beginning of and throughout the growing season.
3. Pest Management Techniques.
  - a. Non-chemical: Mechanical and Physical
    - (1) Method and Location: Mowing/cutting/physical removal of grasses, woody plants and shrubs in all areas listed above and at water treatment/storage facilities. Use of physical barriers and mulch in and around ornamental plant beds. Cleaning and sealing of joints and cracks in parking lots and loading docks.
    - (2) Conducted by Buildings and Grounds and contracted personnel.
  - b. Chemical.
    - (1) Frequency and Location:
      - (a) Performed once in early April/late May to control the emergence of broadleaf weeds in improved lawn areas, athletic fields and recreational areas.
      - (b) Performed once in August to control crabgrass in improved lawn areas, athletic fields and recreational areas.
      - (c) Performed once in June for total vegetation control along railroad right-of-ways and in dirt and gravel parking lots and holding areas,
      - (d) Performed once in June to control woody brush and vines in storm drainage ditches and along fence lines.
    - (2) Method: Motorized sprayer equipment.
    - (3) Conducted by: State certified contract personnel.
    - (4) Chemicals typically used:
      - (a) Round-up (Glyphosate)
      - (b) Triplett (24D)
    - (5) Control Standard: 95% control of target pest.
4. Precautions for Sensitive Areas, and Environmental Concerns: See the following sections and associated paragraphs:
  - (1) **Health and Safety** - Protection of the public.
  - (2) **Environmental Protection** - Sensitive areas and Endangered/protected species and critical habitat
5. Prohibited Practices: See **Environmental Protection, Prohibited activities.**

**PEST:** General household/nuisance pests, which include cockroaches, ants, spiders, silverfish, earwigs, crickets, fleas, wasps and other occasional pests.

**SITE:** Food handling facilities, quarters, Post Exchange, Commissary, warehouses, industrial work areas, offices and storage facilities.

1. Purpose: While none of these pests pose medical problems at this time, population control of these pests is required to reduce their populations to tolerable levels, or to temporarily eliminate them, in order to maintain the welfare and morale of building occupants and installation residents.

2. Surveillance:

a. Conducted by: Building occupants, DOD certified pest controllers and state certified contract personnel.

b. Methods: Visual observations by building occupants, and both visual inspections and sticky traps/glue boards by contracted personnel.

c. Frequency: Daily for observations performed by building occupants. Biweekly for contracted services.

3. Pest Management Techniques.

a. Non-chemical: Mechanical and Physical

(1) Method and Location: Removal of breeding/harborage sites, ensuring proper facility maintenance, and maintaining high levels of sanitation in all areas listed above.

(2) Conducted by: Buildings and Grounds personnel, facility occupants, DOD pest controllers Preventive Medicine personnel, and state certified contract personnel.

b. Chemical.

(1) Frequency and Location:

(a) Performed in food handling facilities when cockroach surveillance counts equal or exceed 1 roach per trap, using 10 sticky traps for surveillance.

(b) Performed for other pest in all areas when surveillance counts equal or exceed five pests, or there is evidence that pests are becoming established as inhabitants of the dwelling/facility.

(2) Method: Bait stations.

(3) Conducted by: State certified contract personnel.

(4) Chemicals typically used and EPA Reg No#.::

(a) MAX FORCE, 64248-5

(b) PF DRAX ANT BAIT, 9444-131

(c) FICAM-W, 45639-1

(d) FICAM-D, 45639-3

(e) PT515, 499-240

(f) FICAM (Wasp & Hornet Spray), 45639-140

(g) OBI (TEMPO), 3125-372

(5) Control Standard:

(a) Cockroaches and ants: Once controls are initiated in food handling facilities, the facility shall remain virtually free of pests. In all other facilities, control shall be established within 30 days and remain free of infestation for at least 30 days thereafter.

(b) All other pests: Control in food handling facilities shall remain at less than two pest sightings in a 30 day period. In all other facilities, controls shall be established in one visit. If re-treatments are necessary, and there is no evidence to indicate that other circumstances are

significantly attributing to the infestation, said treatments shall be performed at no additional cost to the Government.

4. Precautions for Sensitive Areas, and Environmental Concerns: See the following sections and associated paragraphs:

(1) **Health and Safety** - Protection of the public.

(2) **Environmental Protection** - Sensitive areas and Endangered/protected species and critical habitat.

5. Prohibited Practices: See **Environmental Protection**, Prohibited activities.

**PEST:** Miscellaneous vertebrate pests, primarily mice, birds and a variety of vertebrate species indigenous to the natural habitat surrounding the installation.

**SITE:** Food handling facilities, quarters, Post Exchange, Commissary, warehouses, industrial work areas, offices and storage facilities.

1. Purpose: To limit the potential for mice to act as disease reservoirs, limited vertebrate burrowing and gnawing activities, resulting in the destruction or contamination of foods and stored products, and to prevent them from interfering with depot operations.

2. Surveillance:

a. Conducted by: Building occupants, Preventive Medicine personnel, DOD certified pest controllers, Buildings and Grounds personnel and state certified contract personnel.

b. Methods: Visual observations by building occupants, Preventive Medicine personnel and Buildings and Grounds personnel, and both visual inspections and glue boards by contracted personnel.

c. Frequency: Daily for observations performed by building occupants. Biweekly for contracted services.

3. Pest Management Techniques.

a. Non-chemical: Mechanical and Physical

(1) Method and Location: Removal of breeding/harborage sites, ensuring proper facility maintenance, and maintaining high levels of sanitation in all areas listed above.

(2) Conducted by: Buildings and Grounds personnel, facility occupants, DOD pest control personnel, and custodial contractors.

(3) Use of glue boards by state certified contract personnel.

(4) Use of traps by DOD certified pest control personnel.

b. Chemical.

(1) Frequency and Location: Performed only when warranted, and then only for the control of mice in warehouse type facilities.

(2) Method: EPA approved Bait stations.

(3) Conducted by: State certified contract personnel.

(4) Chemicals used and EPA Reg No#.: TALON, 10182-48

(5) Control Standard: Control shall be established within 30 days and the site shall remain free of infestation for the remainder of the contract.

4. Precautions for Sensitive Areas, and Environmental Concerns: See the following sections and associated paragraphs:

(1) **Health and Safety** - Protection of the public.

(2) **Environmental Protection** - Sensitive areas and Endangered/protected species and critical habitat.

5. Prohibited Practices: See **Environmental Protection**, Prohibited activities.

**PEST:** Disease vectors and medically important arthropods: Mosquito, biting gnats and filth flies cause most of the problems on the depot, but are not medical problems, and breed almost exclusively in the wetland areas surrounding the installation.

**SITE:** Food handling facilities, quarters, Post Exchange, Commissary, warehouses, industrial work areas, offices and storage facilities.

1. Purpose: To limit their potential as disease vectors, and to reduce their populations to tolerable levels, or to temporarily eliminate them, in order to maintain the welfare and moral of building occupants and installation residents.

2. Surveillance:

a. Conducted by: DOD certified pest controllers, state certified contract personnel and by personnel from the Preventive Medicine personnel, when requested.

b. Methods: Visual inspections and standard fly grids/sticky traps for filth flies, and larval surveys in standing water, and use of light traps.

c. Frequency: Visual inspections of food handling facilities are performed biweekly. Standard fly grids and sticky traps are utilized when population numbers warrant monitoring. Mosquito surveys are conducted only when requested by the IPMC or directed by Preventive Medicine personnel.

3. Pest Management Techniques.

a. Non-chemical: Mechanical and Physical

(1) Method and Location: Removal of breeding/harborage sites, use of door and window screens, ensuring proper facility maintenance, elimination of artificial container breeding sites (mosquitoes), and maintaining high levels of sanitation.

(2) Conducted by: Buildings and Grounds personnel, facility occupants, DOD pest control personnel, and custodial contractors.

(3) Use of sticky traps supplied and placed by state certified contract personnel (filth flies).

b. Chemical.

(1) Frequency and Location:

(a) Mosquitoes and biting gnats: Performed only when directed by Preventive Medicine personnel, and only then in developed areas within the installation cantonment area.

(b) Performed at or about food handling facilities when surveillance counts exceed 10 adult filth flies on a standard fly grid left for one minute adjacent to a breeding site.

(2) Method:

(a) Mosquitoes and biting gnats: As directed Preventive Medicine personnel.

(b) Filth flies: IAW EPA standards and best standard practices for this type of work.

(3) Conducted by: State certified contract personnel.

(4) Chemicals used and EPA Reg No#.: As directed by Preventive Medicine personnel and IAW EPA standards and best standard practices for this type of work. Recommended pesticides include pyrethroids, B.t., Sevin, etc., where appropriate.

(5) Control Standard:

(a) Mosquitoes: As established by the Preventive Medicine activity.



(b) Filth flies: Once chemical controls are initiated, populations shall be maintained below control initiation levels for the remainder of the contract, until other non-chemical control measures can be taken.

4. Precautions for Sensitive Areas, and Environmental Concerns: See the following sections and associated paragraphs:

(1) **Health and Safety** - Protection of the public.

(2) **Environmental Protection** - Sensitive areas and Endangered/protected species and critical habitat.

5. Prohibited Practices: See **Environmental Protection**, Prohibited activities.

**PEST:** Pests of ornamental plants and turf

**SITE:** Within the developed areas of the cantonment area (planting beds, ornamental trees, residential housing area, etc.).

1. Purpose: To limit damage to ornamental plants when damaging populations occur. These pests are rarely a problem.

2. Surveillance:

a. Conducted by: Installation Buildings and Grounds personnel.

b. Methods: Visual inspections and plant/pest sampling.

c. Frequency: Inspections are performed periodically from early Spring through mid Fall, and when contracted landscaping services are utilized.

3. Pest Management Techniques.

a. Non-chemical: Mechanical and Physical

(1) Method and Location: Removal of diseased turf/vegetation and the use of insect traps are emphasized in controlling these pests.

(2) Conducted by: Housing residents and Buildings and Grounds/contracted personnel.

b. Biological:

(1) Method and Location: Maximum use of natural controls are also emphasized, which may include burning and the introduction of natural predators and parasites.

(2) Conducted by: Buildings and Grounds personnel and/or contract personnel.

c. Chemical.

(1) Frequency and Location: Only when warranted, and only then within specific developed areas within the installation cantonment area.

(2) Method: Normally, by use of mechanical equipment such as power sprayers.

(3) Conducted by: State certified contract personnel.

(4) Chemicals used and EPA Reg No#.: As recommended by DOD and state certified pest control personnel IAW EPA standards and best standard practices for this type of work.

(5) Control Standard:

(a) For pests which occur in sudden severely damaging outbreaks (armyworms, sod webworms, etc.) the minimum level of control shall be the reduction or elimination of the pest population(s) to a level at which no further damage is being done to the host plant(s) within 48 hours.

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(b) For pests which slowly build damaging populations (mole crickets, scale insects, etc.) the minimum level of control shall be a 90% reduction of the pest population(s) 60 days after treatment is required.

4. Precautions for Sensitive Areas, and Environmental Concerns: See the following sections and associated paragraphs:

(1) **Health and Safety** - Protection of the public.

(2) **Environmental Protection** - Sensitive areas and Endangered/protected species and critical habitat.

5. Prohibited Practices: See **Environmental Protection**, Prohibited activities.

## Appendix B

### Staffing Responsibilities and Annual Workload

**B-1. Staffing Responsibilities.** The following table represents the responsibilities of the various organizations involved in the execution of the IPMP. Also see “*Responsibilities*” of this plan.

Table B-1, Staffing responsibilities

Activity	Pest Surveillance	Pest Control	Program Funding	Program Mgmt	Reporting
Preventive Medicine Service	X	N/A	N/A	N/A	X
IPMC/DOD certified Personnel	X	X (non-chemical only)	N/A	X	X
Building occupants & residents	X	X (non-chemical only)	N/A	N/A	N/A
State certified Contract personnel	X	X	N/A	N/A	X
Public Works Buildings & Grounds	X	X (non-chemical only)	X	N/A	N/A
Commander	N/A	N/A	N/A	*X	N/A

\* The Commander has final approval authority of the IPMP

#### B-2. Annual Workload

a. Scheduled facilities. State certified pest control personnel inspect the facilities listed in table B-2 on a bi-weekly basis for roaches, rodents, filth flies and nuisance pests, and treat as required, per the requirements of this plan and other contract requirements.

Table B-2, Annual workload, scheduled facilities

Bldg No#.	Description	Size (sqft)
1A	Annex Cafeteria	9,609
11	Post Cafeteria	27,650
11-1B	Health Clinic	8,425
230	Mess Hall, 1st floor offices and utility room	8,540
333	Club Annex	10,771
334	Post Exchange	15,600
816	Commissary	18,059
TOTAL SQFT		98,654

b. Both DOD and state certified pest control personnel are used to provide on-call pest control services to all installation facilities not listed in table B-2 per the requirements of this plan and pertinent contract requirements. Surveillance for pests in these areas rests with the occupants and/or tenants. State certified contract personnel are utilized in each operation a chemical pesticide is used. The approximate number of on-call services provided each year by contracted personnel is 98. The

approximate number of on-call services provided by DOD certified personnel performing non-chemical controls per year is 30.

c. Undesirable Plants. Utilizing state certified pest control personnel, provide herbicide services for the following areas as depicted, per the requirements of this plan and other contract requirements. See appendix A, "Undesirable Plants" for proposed frequencies.

Table B-3, Undesirable Plants

Area	Size	Type Control
Improved lawn areas	350 acres	Broadleaf and Crabgrass
Athletic & recreational areas	5 acres	Broadleaf and Crabgrass
Railroad lines & yards	6500 linear feet of rail line 8 acres of rail yards	Total vegetation
Dirt & gravel parking lots & holding areas	4 acres	Total vegetation
Fence lines	25,000 linear feet	Woody brush & vine
Storm drain ditches	1,200 linear feet	Woody brush & vine
Guard rails	2,600 linear feet	Total vegetation
Paved parking areas	7 acres	Total vegetation

## Appendix C

### Coordinating Agencies and Personnel

#### Installation Activities

Commissary Store Officer .....	5-7628
Community and Family Activities Division .....	5-7509
Director of Contracting .....	5-7232
Engineering Division .....	5-7301
Environmental Management Division .....	5-7098
Environmental Coordinator, Randy Didier .....	5-7098
Directorate of Industrial Risk Management .....	5-6637
Fire Department .....	5-7300
Housing Branch.....	5-7970
Industrial Hygienist .....	5-6384
Buildings and Grounds .....	5-7547
Safety Division .....	5-7027
U.S. Army Health Clinic .....	5-7225

#### Other DOD Agencies

Preventive Medicine Activity (Carlisle Barracks) ..... DSN 242-3902

Office of the Director for Environmental Programs (ODEP)

"Army Entomologist" (Mr. Raul Marroquin) ..... DSN 226-8813-19

U.S. Army Environmental Center (USAEC)

Army Senior Pest Management Consultant (Dr. Steven Bennett)..... DSN 584-1565

U.S. Army Center for Health Promotion and Preventive

Medicine (USACHPPM)

Entomological Sciences Program (Dr. Edward Evans) ..... DSN 584-3613

**Pesticide Hotline..... DSN 584-3773**

Hazardous Substance Spill Response

During duty hours: ..... DSN 584-4375

Non-duty hours: ..... DSN 584-4375

Regional Activities

North (Ft Meade) ..... DSN 923-6502

South (Ft McPherson) ..... DSN 572-2564

West (Fort Lewis) ..... DSN 347-0084

Armed Forces Pest Management Board, Defense Pest

Management Information and Analysis Center ..... DSN 291-5365

**Other Federal and State Agencies**

U.S. Department of Agriculture .....(570)587-3991

U.S. Environmental Protection Agency (EPA), Office of

Pesticide Programs .....(703)305-7090

Region III .....(570)787-9800

U.S. Fish and Wildlife Service (Gary Swihart) .....(804)693-7118

Pennsylvania Department of Agriculture (DOA)

State DOA Office .....(570)787-4853

Regional Office .....(570)836-2181

Center for Disease Control (Atlanta Georgia) .....(404)332-4555

**Other Agencies**

Chemical Transportation Emergency Center (CHEMTREC).....(800)424-9300

**Emergency Numbers**

Ambulance 911

Fire 911

Health clinic 5-7225

Staff Duty Officer 5-7200

**Environmental Management Division**

Installation Pest Management Coordinator (IPMC)

5-6594

Environmental Coordinator (EC)

5-7098/7090

**Chemical Transportation Emergency Center (CHEMTREC) at (800) 424-9300.**

## **Appendix D**

### **Pesticide spill cleanup and notification procedures**

**D-1.** All pesticide spills will be immediately reported to the fire department, the IPMC and the Environmental Coordinator (EC). All spills shall be handled in accordance with the guidelines detailed in this plan, the Installation Spill Contingency Plan (ISCP) and the installation Spill Prevention Control and Countermeasures Plan (SPCCP). Complete copies of the ISCP and the SPCCP can be found at the EMD office, Building 7, extension 5-7098. All PC's will wear the appropriate personal protective clothing and equipment required while cleaning up a pesticide spill or attempting to rescue injured and/or contaminated personnel. On-Post Emergency numbers and points of contact are listed in appendix B of this plan. Off-post assistance numbers and points of contact are listed in paragraphs D-5 and D-6 below.

**D-2.** The procedures to follow in the case of a pesticide spill are as follows:

a. When a pesticide spill occurs or is discovered-

(1) Immediately determine if any personnel are injured and/or contaminated. If there are any injured and/or contaminated personnel, remove them from the site to a safe area upwind from the spill.

(2) Contain the spill using the spill response kit(s) and call the fire department and provide the following information:

- (a) Time of spill
- (b) Location of spill
- (c) Material released/spilled (if known)
- (d) Estimated quantity released
- (e) Actions taken
- (f) Number and types of victims
- (g) Whether fire or explosion is involved or imminent
- (h) Callers name
- (i) Callers telephone number
- (j) Environmental conditions at the site

(3) Report the spill to the IPMC and the EC at the EMD office at 895-6594/7098.

(4) If necessary-

(a) Remove contaminated clothing from victim(s) and wash contamination off victim(s) by using soap and water.

(b) Rinse the victim's eyes with water for fifteen (15) minutes and administer first aid until medical assistance arrives.

(5) Secure the spill site from entry by unauthorized personnel by roping off the area and posting warning signs. Provide the pesticide container and label to the spill response personnel upon their arrival at the spill site.

b. For liquid pesticides spills-

(1) Repositioning the pesticide container, if possible, to prevent further contamination.

(2) Prevent the spill from spreading by trenching around the spill or encircling the spill with a dike of sand, absorbent material, or (as a last resort) soil and/or rags.

(3) Use an absorbent material to cover the spill.

c. For dry pesticides, cover the spill with a polyethylene or plastic tarpaulin and secure it to the ground to prevent the pesticide from becoming airborne.

**D-3.** To clean up a pesticide spill involving dry chemicals, simultaneously, roll up the tarp and sweep up the pesticide using a broom, shovel, or dustpan in order to prevent the material from becoming airborne. Collect the pesticide in heavy plastic bags, properly secured and labeled for disposal.

Spilled granular/bait materials need only be swept up. For spills involving liquid chemicals-

a. Place absorbent material over the pesticide and work the material into the pesticide using a broom or shovel.

b. Collect the spent absorbent material in properly labeled, DOT approved containers for disposal.

c. Remove contaminated soil to a depth of at least three inches below the wetted surface line and place it in a properly labeled leak proof container for disposal.

**D-4.** Pesticide spill cleanup kits will be maintained on all vehicles used for pest control services. A suggested list of items to be contained in each spill kit is provided in table D-1. In addition, absorptive clay and/or pillows may be used for absorbing spills, and sodium hypochlorite (bleach) and hydrated lime may be used for decontamination (neutralization of spills). All materials used for cleanup will be disposed of as pesticide-related waste in accordance with the requirements and procedures cited in paragraph 4-3 and the instructions of the EC and the Installation Response Team (IRT).

Table D-1, Suggested Spill Kit Components

ITEM	QUANTITY (each)
55-gallon open-head drum	1
50-pound bag of absorbent material (absorptive clay and/or clay pillows)	1
1-gallon jug of household bleach (Sodium hypochlorite (bleach))	3
1-gallon jug of liquid detergent	1
24-inch push-broom	1
Square point "D-handled" shovel	1
Shop brush (dust pan brush)	1
Dust pan	1
Polyethylene bags w/ties	12

**D-5.** For emergency assistance on a pesticide spill that threatens life or gross contamination to the environment, call the **Chemical Transportation Emergency Center (CHEMTREC)** at (800) 424-9300.

**D-6.** Decontamination solutions can be used to decontaminate spills of dust, granular materials, wettable powders, and liquid pesticides. However, the majority of the spilled pesticide should be cleaned up prior to the application of decontaminating solutions. The type(s) and amount(s) of decontaminating material(s) to be used will be determined by the EC and/or IRT. Table D-2 is provided as a guide for decontaminating certain pesticides:



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**D-7.** Tools, vehicles, equipment, contaminated metals and/or other nonporous objects can be decontaminated by using detergent and an appropriate decontamination solution. The solution used to decontaminate these materials will be soaked up utilizing absorbent materials and placed in an appropriately labeled leak proof container for disposal. When there is a doubt as to the type of decontamination solution to use, only detergent and water should be used. Porous materials such as wood that can not be adequately decontaminated for use will be replaced.

**D-8.** All contaminated materials that can not be effectively decontaminated will be removed and placed in appropriately labeled leak proof containers for disposal. Disposal of all waste materials (spilled pesticides and contaminated materials) will be disposed of in accordance with the requirements/procedures cited in paragraph 4-3 and the instructions of the EC and the IRT. All containment, control, cleanup, decontamination and disposal activities will be carried out under the direct supervision of the EC/IRT.

Table D-2, Decontamination Guide

Use Lye/Lime for	Use Chlorine Bleach for	DO NOT Use Decontamination Chemicals for These Pesticides
Acephate	Calcium cyanide	Alachor
Atrazine	Chlorpyrifos	Chloramben
Captan	Fonophos	Chlorinated hydrocarbons
Carbaryl		Diuron
Dalapon		Methoxychlor
Diazinon		Pentachlorophenol
Dichlorvos		Picloram
Dimethoate		2,4-D
Malathion		Bromacil
Naled		Glyphosate
Propoxur		Simazine

#### **WARNINGS:**

1. There is a slight potential for creating toxic by-products when using these procedures.
2. **Do not** use lye on aluminum surfaces.
3. **Caution:** caustic soda (lye) can cause severe eye damage to personnel not properly protected. Protect against contact by wearing unventilated goggles, long-sleeved work clothes with coveralls, neoprene gloves, a chemical resistant apron and an approved respirator.
4. **Do not** store or mix chlorine bleach near pesticides containing amine, nor attempt to use chlorine bleach to decontaminate areas contaminated with amine-containing pesticides. Mixing of these materials can cause a violent reaction resulting in fire.
5. Calcium hypochlorite is not recommended as a decontaminating agent due to it's fire hazard.

#### **NOTES:**

1. Pesticides amenable to treatment utilizing lye or lime may be decontaminated when mixed with an excess quantity of either of these materials.
2. For pesticides that can be degraded by treatment with bleach, use one gallon of household bleach (which contains sodium hypochlorite) per gallon of pesticide spilled.

## Appendix E

### Soil Types and Land Use Inventory for Semi-Improved Lands

E-1. Table E-1 depicts the various soil types found at TYAD.

Table E-1, Soil Types

Soil Symbol and Name	Brief Description
CnB - Chippewa and Norwich, extremely stony soils; 0-8%.	Deep, poorly drained, nearly level to gently sloping, occurs in depressions and drainage-ways on uplands. Slow permeability and a high water table near or at the surface during wet seasons. Best suited to woodland usage, but productivity is limited. Capability subclass is VIIs.
Cy - Cut and Fill Land.	Cut and fill lands that have been altered by earthmoving such that soil features are not predictable and are variable. No capability class assigned.
ExB - Empeyville, extremely stony sandy loam.	Deep, moderately well to somewhat poorly drained soils on level to gently sloping areas of broad plateaus. Permeability is slow and a high water table is present at 12-36 inches deep most of the year. The soil is strongly to very strongly acidic. Best suited to woodland use, but productivity is limited. Capability subclass VIIs.
LyE - Lordstown and Oquaga, extremely stony soils; 25-70%.	Moderately deep, well drained soils on steep to very steep slopes. Available water capacity is very low to moderate. Soil is strongly to extremely acidic. Rooting depth is restricted by shallow bedrock. Best suited to woodland usage, but productivity is limited. Capability subclass VIIs.
MoB - Morris, extremely stony silty loam; 0-8%.	Deep, somewhat poorly drained soils on gently sloping to nearly level areas adjacent to drainage-ways and depressions on broad plateaus and ridges. Permeability is very low. Numerous large rocks on the surface. Seasonal high water table at 6-18 in. depth. Best suited to trees and productivity is good. Capability subclass VIIs.
Mp - Mucky peat; deep.	Deep, very poorly drained organic soils that are nearly level within depressions. Soil consists of three feet or more of organic muck and peat over mineral soil. Most of the soil is in brush and poor quality woodland; some areas have potential for peat mining. Soil has a poor potential for trees; wildlife habitat and open space are possible uses. Capability subclass VIIs.
Ms - Mucky peat;	Deep, very poorly drained, nearly level organic soils in

Soil Symbol and Name	Brief Description
shallow.	depressions on broad plateaus and valleys adjacent to drainage ways. Soil consists of 18-36 in. of organic muck and peat over mineral soil. A water table is at the surface most of the year. Soil has a poor potential for trees. Wildlife habitat and open spaces are possible uses. Capability subclass is VIIw.
OxB & OxC – Oquaga-Lackawanna channery loams; 0-8% & 8-25% respectively.	Moderately deep to deep, extremely stony soils. The slope class B soil is nearly level to gently sloping on mountain tops and broad plateaus. The slope class C soil is moderately sloping and occurs on the sides of mountains and broad plateaus. Permeability is slow to moderate and the soil is strongly to extremely acidic. These soils have shallow bedrock and a fragipan that limits roots penetration. The best use is as woodland. Capability subclass VIIs.
SxB – Swartwood, extremely stony sandy loam; 0-8%.	Moderately deep, nearly level to gently sloping, extremely stony, well drained soils on the tops of plateaus and ridge tops. Subsoil has a firm and brittle fragipan. Soil is strongly to extremely acidic. Has a good potential for trees. Capability subclass VIIs.
VaC – Very stony land and rock outcrops; sloping.	Miscellaneous areas with slopes of 2-15% and mass rock fragments with little soil, or bedrock exposed by geologic erosion. Soil has some limited potential for wildlife habitat and open space. Capability subclass VIII.
VxB – Volusia, extremely stony silt loam; 0-8%.	Moderately deep, somewhat poorly drained soils on plateaus and broad ridges adjacent to drainageways and depressions. Permeability and water capacity is low. Moderately to strongly acidic. Seasonal high water at 6-18 in. depth. Suited for trees and productivity is good. Capability subclass VIIs.
WpB & WpC – Wellsboro, extremely stony loam; 0-8% and 8-25% respectively.	Moderately deep, extremely stony, moderately well drained soils. Slope class B soils are nearly level to gently sloping on broad plateaus and ridge tops. Slope class C soils are moderately sloping on broad plateaus and at the foot of slopes. A seasonal high water table exists at a depth of 18-30 in. The soil is moderately to strongly acidic. Best suited to woodland. Capability subclass VIIs.
WsB – Wurtsboro, channery loam; 2-12%.	Deep, well drained, nearly level to gently sloping soils on broad plateaus. Soil is strongly to extremely acidic and has a seasonal high water table at 18-36 in. Suited to permanent grass and woodlands with good productivity. Capability subclass IIe.
WxB – Wurtsboro, extremely stony loam; 0-8%.	Moderately deep, well drained, extremely stony, nearly level to gently sloping soils on broad plateaus and ridges. The subsoil has a firm to very firm fragipan that restricts rooting depth. A seasonal high water table exists at a depth of 10-36 in. The soil

Soil Symbol and Name	Brief Description
	is strongly to extremely acidic. A good potential for woodland. Capability subclass VIIc.

Notes:

1. Capability classes and subclasses are used to show soil limitations (without major recontouring etc.) for cropland. Capability classes are designated by Roman numerals and range from I through VIII, with I being most suited and VIII being least suited for cropland. Subclasses are designated by lower case letters that refer to the particular soil limitations such as "e" for erosion hazard, "w" for excessive soil water and "s" for shallow stony soils.

2. "Fragipan" is defined as a subsurface soil layer of low porosity which appears cemented and restricts root penetration.

3. The soil associations on the depot are the Chippewa-Norwich-Mucky Peat associations; which are characterized by deep, nearly level, poorly or very poorly drained soils underlain by pinkish gray and gray glacial till and organic material and the Wellsboro-Morris-Lackawanna association; which is characterized by nearly level and gently sloping, deep, well drained to somewhat poorly drained soils underlain by reddish glacial till. (The glacial till is a result of the Wisconsin glaciation).

Source: U.S. Department of Agriculture, Soil Conservation Service. Soil Survey of Monroe County, Pennsylvania. Issued August, 1981.

E-2. Table E-2 depicts the various land uses at TYAD for semi-improved areas. Approximately 1086 acres remain unimproved and are used or designated as wetlands and/or wildlife habitat.

Table E-2, Land Use Inventory – Semi-Improved Land

Semi-Improved Classification	Area Size (acres)	Area Mowed (acres)	Weed Control (acres)	Other Maintenance (type)
Airfield and heliport/helipad	1	----	----	----
Ammunition storage	1	1	1	----
Antenna fields (Radar Range)	54	54	54	----
Small arms range	0	----	----	----
Firebreaks	8	8	----	----
Picnic areas	2	2	2	Policing
Wildlife cover plots	3	----	----	----
Closed landfill area	30	30	----	----
Road shoulders/railroad beds	93	93	93	----

Semi-Improved Classification	Area Size (acres)	Area Mowed (acres)	Weed Control (acres)	Other Maintenance (type)
and appurtenant land areas				
Other semi-improved grounds	15	15	15	----
<b>TOTAL (acres)</b>	207.00	203.00	165.00	

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## Appendix F

### Current Contractors

F-1. The following contracts are currently in-force at the installation.

**Contract Number DAAB17-00-P-3029**

JC Ehrlich Co, Inc

1328 Capouse Avenue

Scranton, PA 18509

Phone .....(570) 676-5522

FAX .....(570) 343-3606

Scope and applicability

The Contractor shall furnish all labor, supervision, tools, materials, equipment and transportation necessary to provide pest control services at TYAD, as required by contract specifications.

The only services not specifically provided under this contract are those which are depicted in appendix B, paragraph B-2.d., *Undesirable Plants*, and Table B-4, *Annual workload, undesirable plants*; and are provided for by a separate herbicide contract.

F-2. The Director of Contracting maintains completed contract information files.

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